COLORADO WATER QUALITY CONTROL DIVISION PERMIT APPLICATION FOR DISCHARGES TO GROUND WATER FROM DOMESTIC WASTEWATER TREATMENT WORKS

APPLICATION INSTRUCTIONS

This application for permit coverage of discharges to ground water from domestic wastewater treatment facilities must be considered <u>complete</u> by the Division prior to initiation of permit processing. Please read all of the instructions carefully and answer each question in the space provided on the application form. Attach additional sheets as necessary to provide complete and accurate information. Where a question is not relevant to your treatment system, enter "Not Applicable" (or NA) on the application form. Include all required supplemental information (such as site geologic and hydrogeologic data) in the permit application package. The Division will notify you if additional information is needed to ensure proper processing of the permit application.

If you have any questions regarding this discharge permit application or your permit requirements, please contact the Colorado Water Quality Control Division Domestic Permits Unit at 303-692-3588.

Two complete copies of the application must be submitted by mail or hand delivered to:

Colorado Department of Public Health and Environment
Water Quality Control Division
4300 Cherry Creek Drive South
WQCD-P-B2
Denver, Colorado 80246-1530

WATER RIGHTS

The State Engineers Office (SEO) has indicated that any discharge that does not return water directly to surface waters (i.e. land application, rapid infiltration basins, etc.) has the potential for material injury to a water right. As a result, the SEO needs to determine that material injury to a water right will not occur from such activities. To make this judgment, the SEO requests that a copy of all documentation demonstrating that the requirements of Colorado water law have been met, be submitted to their office for review. The submittal (which is separate and unique from this discharge permit application) should be made as soon as possible to the following address:

Colorado Division of Water Resources 1313 Sherman Street, Room 818 Denver, Colorado 80203

Should there be any questions on the issue of water rights, the SEO can be contacted at (303) 866-3581. It is important to understand that any CDPS permit issued by the Division does not constitute a water right. Issuance of a CDPS permit does not negate the need to also have the necessary water rights in place. It is also important to understand that even if the activity has an existing CDPS permit, there is no guarantee that the proper water rights are in place.

SPECIFIC INSTRUCTIONS

TWO (2) COMPLETE COPIES MUST BE SUBMITTED. ONE OF THESE COPIES MUST CONTAIN ORIGINAL SIGNATURES.

Please type or print clearly.

Question 1: Provide the facility name and county as you would like it to appear on the discharge permit.

Question 2: If the Division has assigned a previous discharge permit to cover all or part of the discharges to ground water from this waste water treatment work (WWTW), list the permit number. If your WWTW is covered under a general permit, list the general permit certification number. This will assist the Division in locating and tracking your existing permit information.

Question 3: Indicate whether you are requesting coverage for a new (previously un-permitted) ground water discharge <u>or</u> renewal and/or modification of the existing permit listed in Question 2. Include a narrative description of any and all requested permit modifications. Requested modifications to will be reviewed and evaluated for inclusion general permit certifications as appropriate.

Question 4: Indicate the requested permit type. The permit types are described below. Where a general permit is applicable and appropriate to a WWTW, the general permit should be selected. The Division will work with WWTWs to transition coverage under previous general or individual permits to coverage under one of the new general permits. Where an existing WWTW is subject to more stringent effluent limitations under a new general permit than required under a previous discharge permit, the Permittee may be eligible for a schedule of compliance for meeting effluent limitations.

The permit types are described below. The general permits are available for review through the Division web page at www.cdphe.state.co.us/wq/PermitsUnit/index.html, or can be obtained by contacting the Division at 303-692-3500.

• General Permit 631000 - Land Disposal of Effluent from Domestic Wastewater Treatment Facilities (WWTWs): This permit covers WWTWs where effluent limitations (e.g., BOD₅ and total suspended solids [TSS]) and ground water standards (e.g., nitrate, total coliform) are met prior to effluent discharge to an unlined impoundment [i.e., an infiltration basin or any lagoon or impoundment for which the Permittee has not adequately demonstrated that the seepage rate is less than 10⁻⁶ centimeters per second (cm/sec)] and/or a land disposal site.

Monitoring requirements: This permit requires compliance monitoring at the point of effluent discharge. Ground water monitoring wells are not required.

• General Permit 632000 – Land Treatment of Effluent from Domestic Wastewater Treatment Facilities (WWTWs): This permit covers WWTWs where ground water standards (e.g., nitrate, total coliform) are met subsequent to discharge to an unlined impoundment [i.e., an infiltration basin or any lagoon or impoundment for which the Permittee has not adequately demonstrated that the seepage rate is less than 10⁻⁶ centimeters per second (cm/sec)] and/or a land treatment site.

Monitoring requirements: This permit requires compliance monitoring at the point of effluent discharge and at ground water monitoring wells located hydraulically down-gradient of the WWTW. In some cases, lysimeters may be required in addition to, or in lieu of, ground water monitoring.

 General Permit 633000 – Land Treatment of Effluent at Agronomic Rates from Domestic Wastewater Treatment Facilities (WWTWs): This permit covers WWTWs that discharge to ground water solely through land treatment at Division-approved agronomic rates that are not subject to Regulation No. 84, *Reclaimed Water Control Regulation*. To apply for this permit, you must include a copy of the facility's *Land Application Management Plan* with the permit application. The requirements of the Land Application Management Plan are described in Appendix A of the permit application.

Monitoring requirements: This permit requires compliance monitoring at the point of effluent discharge. Ground water monitoring wells are <u>not</u> required.

 General Permit 621000 – Domestic Wastewater Treatment On-site Systems with Design Capacity Equal or Greater than 2,000 Gallons per Day (GPD). This permit covers domestic wastewater treatment on-site systems (e.g., septic systems or mechanical plants with leachfields/soil absorption fields).

Monitoring requirements: This permit requires compliance monitoring at the point of effluent discharge and at ground water monitoring wells located hydraulically down-gradient of the WWTW.

General Permit 622000 – Domestic Wastewater Treatment Works with No Ground Water
Monitoring Requirements. This permit covers domestic wastewater treatment works that have
adequately demonstrated to the Division, and have received Division-approval, that ground water
monitoring is not required to ensure the protection of State waters. This permit requires no
ground water monitoring. Best management practices are emphasized.

To apply for this permit, you must include a copy of the facility's site-specific risk-based analysis with the complete permit application. The requirements of the risk-based analysis are described in Appendix B of the permit application. Coverage under General Permit 622000 will typically be considered only for facilities that meet the following basic criteria:

1. The WWTW shows evidence of advanced treatment to meet the nitrate standard of 10 mg/l as provided in Regulation No. 41, The Basic Standards for Ground Water.

OR

- 1. The depth to ground water underlying the site is greater than 100 feet,
- The soil conditions at the site are appropriate to achieve adequate wastewater treatment, and
- 3. The WWTW meets the minimum set back requirements provided in the *State Board of Health Guidelines on Individual Sewage Disposal Systems (5 CCR1003-6).*
- Individual Ground Water Discharge Permit: Where the available general permits are not applicable to a particular discharge, the WWTW may apply for coverage under an individual ground water discharge permit.

Monitoring requirements: The individual permit will include site-specific monitoring requirements. Individual permits will typically require ground water monitoring.

Question 5: Facility types include commercial business, ski area, campground/RV park, motel/hotel, community system, school, church, etc. Type of ownership includes municipal, county, state, private, ect.

Question 6: Indicate the primary contact for the facility, such as a person with whom we would arrange a site visit.

Question 7: The legal owner of the facility shall be as follows:

 a) In the case of a municipality, a ranking elected official or the city manager, director of public works, etc.

- b) In the case of a special or metropolitan district, the chairman of the district board or the district manager.
- c) In the case of a corporation, including incorporated homeowners associations, the president or vice- president of the corporation.
- d) In the case of a partnership, a general partner.
- e) In the case of a sole proprietorship, the proprietor.

Question 8: The Colorado Water and Wastewater Facility Operators Certification Board (WWFOCB) maintains a program for the certification of wastewater treatment plant operators. Information on the certification program and the requirements for domestic waste water treatment systems is available through the Division web page at www.cdphe.state.co.us/op/ocb/.

Questions 9: Provide any other relevant contact information that you would like us to have, such as another contact for addressing technical questions regarding the treatment system.

Questions 10: The applicant must be the legal owner or operator of the facility.

Question 11: Provide the estimated maximum number of people served by the treatment system (i.e., included in the service area).

Question 12: Commercial taps include restaurants, motels and other generators of residential type waste, but do not include small industries such as radiator shops, commercial laundries, car washes, etc., which shall be listed as industrial taps. Facilities with a design flow of 1 MGD or greater may be asked to provide a list of non-residential customers which includes the name, address and type of business.

Question 13: Describe the system components. For example, "the system consists of a three cell, aerated lagoon system with chlorination before and after effluent storage, storage lagoon, and agricultural land treatment site." Attach additional pages as necessary.

Question 14: Provide the date when the treatment system began operating. Provide an estimated date if an exact date is not known.

Questions 15: Domestic WWTWs are subject to the Site Application and Design Approval requirements provided in Regulation no. 22, *Site Location and Design Approval Regulations*. This regulation and contact information for Colorado District Engineers is available through the Division web page at www.cdphe.state.co.us/wg/engineering/techhom.html.

Question 16: Provide recorded flow data. If flow data are not available, provide best estimates and a description of how these estimates were developed.

Questions 17 – 19: Self Explanatory.

Questions 20 and 21: The flow monitoring and recording devices listed in Question 20 are required under General Permits 631000, 632000, and 633000. General Permits 621000 and 622000 allow for effluent monitoring where influent monitoring is not practicable. Any requested modification to the flow measuring and monitoring requirements provided in the general permits and specified in Question 20 must be clearly stated (with supporting justification) in the space provided in Question 21. Only written requests to the Division with supporting justification will be considered for modification of permit-required flow monitoring requirements. Attach additional pages as necessary.

Question 22: The Division may require permittee's to show technical documentation of the accuracy of any flow measuring device used in obtaining data that is submitted in monitoring reports. At a minimum, flow measuring devices must be accurate to within \pm ten percent (10%) of the actual flows undergoing measurement. Accuracy of the flow meter must be determined annually.

Question 23: The Division is using a geographic information system to enhance data tracking and organization. This question requires the latitude and longitude of each outfall (e.g., point of discharge, point of land application). The latitude and longitude must be provided as degrees, minutes, and seconds

(to the nearest 15 seconds) or in decimal degrees with three decimal places. The latitude and longitude may be obtained with a Global Positioning System (GPS) unit (i.e., a hand-held instrument that uses satellite signals to pinpoint locations). If you do not own a GPS unit, you may be able to borrow one from a sportsman (GPS units of good quality are sold in sporting goods stores for hunting or hiking) or from surveyors or engineers that are working on the project. This information may also be obtained from U.S. Geological Survey topographical maps (available at area map stores) and various websites, including http://terraserver.microsoft.com, http://

Note that each discharge point listed in Question 23 must be depicted on the map(s) requested in Section K of the permit application.

Questions 24 - 25: Self explanatory.

Question 26: "Impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is used for the storage, treatment, evaporation or discharge of pollutant-containing waters, sludge or associated sediment (Reference Regulation No. 61, *Colorado Groundwater Discharge Permit System Regulations*). This includes lagoons, polishing ponds, etc.

Note that the complete discharge application must include a seepage rate study (e.g., mass balance calculations) for <u>each</u> clay lined impoundment included in the treatment system. Contact the District Engineer in your county for guidance in completing seepage evaluations. Contact information for Colorado District Engineers is available thorough the Division web page at www.cdphe.state.co.us/wg/engineering/techhom.html.

Question 27: Permit limitations for TSS may be adjusted for waste stabilization ponds which treat domestic waste provided that (1) the waste stabilization ponds are the principal process used for secondary treatment; and (2) the facility is designed to achieve the solids removal possible with best waste stabilization pond technology. (Regulation No. 62, *Regulation for Effluent Limitations*)

Question 28: Self explanatory.

Question 29: WWTWs that treat wastewater through land application at above- agronomic rates may be covered under General Permit 632000. Note that the permit application must include the requested information regarding the land application site. WWTWs that treat wastewater through land application at Division-approved agronomic rates may be covered under General Permit 633000. To apply for this permit, you must include a Domestic Wastewater Land Application Management Plan for the Division's review and approval. Appendix A of the permit application provides additional information on the contents of a land application management plan.

Question 30: WWTWs that use reclaimed waster for landscape irrigation under the provisions of Regulation No. 84, *Reclaimed Water Control Regulation* (5CCR 1002-84) must submit a Notice of Intent and receive a Letter of Authorization from the Division. Additional information is available through the Division web page at www.cdphe.state.co.us/wq/PermitsUnit/reuse/index.html, or by contacting the Reclaimed Water Program Coordinator at 303-692-3500.

Question 31: Ground water monitoring wells are required under *General Permit 632000 for Land Treatment of Effluent* and *General Permit 621000 for Domestic Wastewater Treatment On-site Systems with Design Capacity Equal or Greater than 2,000 Gallons per Day (GPD)*, and are typically required under an individual discharge permit.

If the application is for General Permit 632000 or 621000, or an individual permit where ground water monitoring will likely be required based on known treatment system design and site conditions, at least one (1) proposed up-gradient monitoring well location and at least two (2) proposed ground water monitoring well locations must be included with the permit application. The up-gradient location (delineated as 050A) is necessary to determine the quality of ground water coming onto the Permittee's property. The down-gradient well locations (e.g., 050B, 050C) must meet the requirements for a "Point of Compliance" provided in Regulation No. 41, Basic Standards for Groundwater, and must be based on a

risk-based approach that considers design and performance of the system, depth to ground water, location of nearest uses, distance to and/or barriers to mixing of effluent with ground water, and other pertinent factors.

The proposed monitoring locations and Point of Compliance with ground water standards must be determined by a qualified person, e.g., Professional Geologist, geotechnical engineer or other similarly qualified professional hired or employed by the Permittee. The monitoring locations and Point of Compliance approved by the Division will be delineated in general permit Certification or in the individual discharge permit, as appropriate.

All existing and new well locations that are proposed for ground water monitoring under the discharge permit must be depicted on the map(s) required in Section K of the permit application.

Question 32: Self explanatory.

Question 33: Where a facility adequately demonstrates in writing to the Division that site-specific ambient (background) concentrations of chloride, nitrate, sulfate, and/or total coliform in ground water exceed the limitations in the permit, the Division may, on a case-by-case basis, establish site-specific effluent limitations for these parameters under the provisions of Regulation No. 41, *Basic Standards for Ground Water* (Ref. 41.5(C)(6)). In addition, the Division may, on a case-by-case basis, grant a variance from the chloride and/or sulfate discharge limitations provided in the permit under the provisions of Regulation No. 61, Colorado Discharge Permit Regulations (Ref. 61.12).

Question 34: Where a facility adequately demonstrates in writing that to the Division that a reasonably well-defined relationship has been developed between total dissolved solids (TDS) and conductivity based on ground water sampling and analysis at the site, Division may, on a case-by-case basis, allow for monitoring of conductivity in lieu of TDS.

Questions 35 - 36: Self explanatory.

Question 37 - 38: If and when the Permittee removes sludge/biosolids from its treatment system, the facility is required to obtain coverage under the EPA Region 8 General Sewage Sludge Permit prior to the solids removal, hauling, beneficial use, and/or landfilling. Information on EPA's Biosolids Program is available at www.epa.gov/owm/mtb/biosolids/index.htm.

If land application of biosolids for beneficial use is practiced or if biosolids are sold or given away, then the facility is also subject to the provisions of Colorado Regulation 64, *Biosolids Regulation*. Information on the Colorado biosolids program is available through the Division's webpage at www.cdphe.state.co.us/wq/PermitsUnit/biosolids/index.html, or by contacting the Biosolids Program Coordinator at 303-692-3500.

Questions 39: Domestic wastewater treatment systems that receive discharges of non-domestic wastes from industrial users are subject to the provisions of Colorado Regulation No. 63, *Pretreatment Regulations*. Additional information on Colorado's Pretreatment Program is available through the Division web page at www.cdphe.state.co.us/wq/PermitsUnit/pretreat/index.html, or by contacting the Pretreatment Program Coordinator at 303-692-3500.

Question 40: Self explanatory.

Question 41 (Certification) - The application form must be signed by both the owner(s) and operator(s) of the facility as identified in Questions 7 and 8, respectively.

Appendix A – Provides the requirements of the *Land Application Management Plan* which must be submitted along with the permit application to request coverage under General Permit 633000.

Appendix B – Provides the requirements of the *Risk-Based Analysis* which must be submitted along with the permit application to request coverage under General Permit 622000.

Appendix C – Provides a list of toxic pollutants and hazardous substances which must be identified in
the permit application if they are discharged to the WWTW and a list of categorical industries which must
be reported if they contribute waste to the WWTW.

Help is Available

If you have any questions regarding this discharge permit application or your permit requirements, please contact the Colorado Water Quality Control Division Domestic Permits Unit at 303-692-3588.